

Section 4: Burden of ill-health: general health

Cardiovascular disease



a single version of the truth



Related briefings in the JSA for Health and Wellbeing

Briefing (and hyperlink)	Section
Diabetes	Burden of ill-health: general health
Obesity	Health promotion and preventative services
Men's health	Health promotion and preventative services
Physical activity & healthy eating	Health promotion and preventative services
Smoking	Health promotion and preventative services

Edition

Edition	Version no.	Changes/Comments
2012/13	1	
2013/14	1	

Outcome Frameworks Summary

The Public Health Outcomes Framework for England, 2013-2016¹ outlines the overarching vision for public health as “to improve and protect the nation’s health and wellbeing, and improve the health of the poorest fastest”. The NHS Outcomes Framework² set out how the improvement of healthcare outcomes for all will be the primary purpose of the NHS. The Clinical Commissioning Group Outcomes Indicator set (CCGOIS) measures the health outcomes and quality of care achieved by clinical commissioning groups³. The following indicators from these frameworks are relevant to this section.

Framework	Reference	Indicator
Public Health	2.11	Diet
Public Health	2.12	Excess weight in adults
Public Health	2.13	Proportion of physically active and inactive adults
Public Health	2.14	Smoking prevalence – adults (over 18s)
Public Health	2.17	Recorded diabetes
Public Health	2.22	Take up of the NHS Health Check programme – by those eligible
Public Health	3.1	Air pollution
Public Health / NHS	4.4 / 1.1	Mortality from cardiovascular diseases
Public Health	4.15	Excess winter deaths
NHS	2	Health-related quality of life for people with long-term conditions
NHS/ CCGOIS	3.4	Improving recovery from stroke- people who have had a stroke who: <ul style="list-style-type: none"> • are admitted to an acute stroke unit within four hours of arrival to hospital • receive thrombolysis following an acute stroke • are discharged from hospital with a joint health and social care plan • receive a follow-up assessment between 4-8 months after initial admission
CCGOIS	1.1	Cardiac rehabilitation completion
CCGOIS	1.1	Mortality within 30 days of hospital admission for stroke

Executive summary

The annual rate of premature mortality from cardiovascular disease (CVD) in Wiltshire has halved in a decade, and Wiltshire has a lower rate than England but not the South West. However, around 260 people still die from CVD each year, and there is work to be done to reduce the health inequalities associated with premature CVD mortality. Addressing risky lifestyle behaviour, to affect smoking, obesity and exercise especially, will be vital as Public Health programmes continue to reduce mortality and morbidity from CVD.

Why this area is important

Cardiovascular disease (CVD) is the biggest cause of mortality in England and the largest single cause of long term ill health and disability. CVD includes heart disease, stroke, diabetes and kidney disease (see the section on [Diabetes](#) for further information), which affect the body in different ways, but are linked by a common set of risk factors.

Damage to the cardiovascular system increases with age, and progresses faster in men than women, in those with a family history of CVD and in some ethnic groups. These 'fixed factors' cannot be changed, but the following 'modifiable factors' can be altered to reduce the risk of disease occurring:

- Smoking
- Physical inactivity and a sedentary lifestyle
- High blood pressure
- Raised cholesterol levels
- Obesity

Further Wiltshire specific information can be found on [Smoking](#), [Physical Activity and Healthy Eating](#) and [Obesity](#).

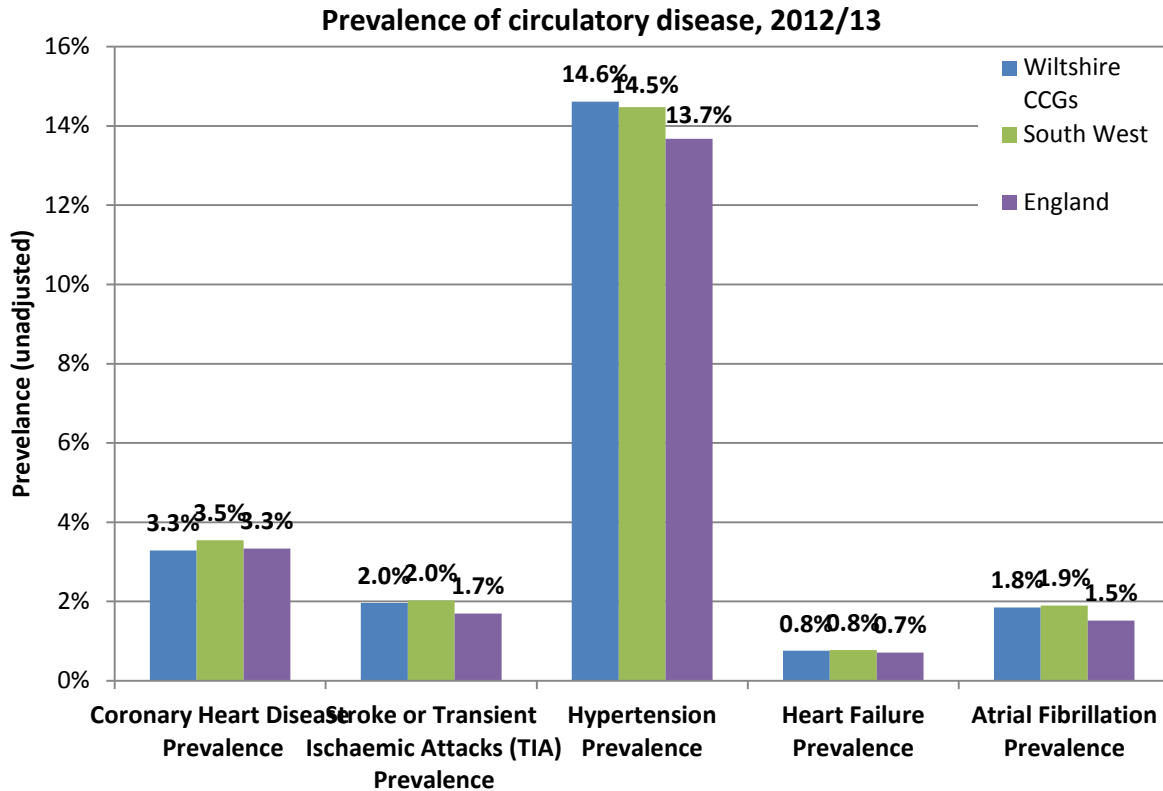
Public Health initiatives are focused on reducing premature (under 75) mortality and morbidity from CVD. Public Health campaigns to promote healthy lifestyles are vital to effect change, particularly in the context of the increasing prevalence of obesity.

What are the needs of the population?

Prevalence

Figure 1 shows the prevalence of 5 common types of circulatory disease in Wiltshire, the South West and England, based on the GP registered population. Care must be taken when comparing areas as the figures do not take into account any variation in population demographics between areas. Nonetheless, the prevalence of each condition in Wiltshire is broadly similar to the recorded prevalence of the areas of comparison.

Figure 1:



Source: QOF 2012/13

The figures presented in Figure 1 may underestimate the true prevalence of these conditions, as they only include those people engaged with health services at GP level. People not registered with a GP are not included in the prevalence statistics. Modeled prevalence figures such as those reported in the CVD Profile for Wiltshire attempt to account for this population, and so suggest correspondingly higher prevalence rates⁴.

Hospital Admissions

As Table 1 shows, there were fewer hospital admission spells for CVD⁵, for Coronary Heart Disease (CHD) but more for Stroke in 2012/13 than in 2011/12. Further there was fewer bed days for CVD, for Coronary Heart Disease (CHD) but more for Stroke. Admissions were significantly lower than expected when compared to the England values for CVD and CHD, but slightly higher than expected for stroke.

Table 1: Hospital admissions in Wiltshire 2012/13 (2011/12 data in brackets)

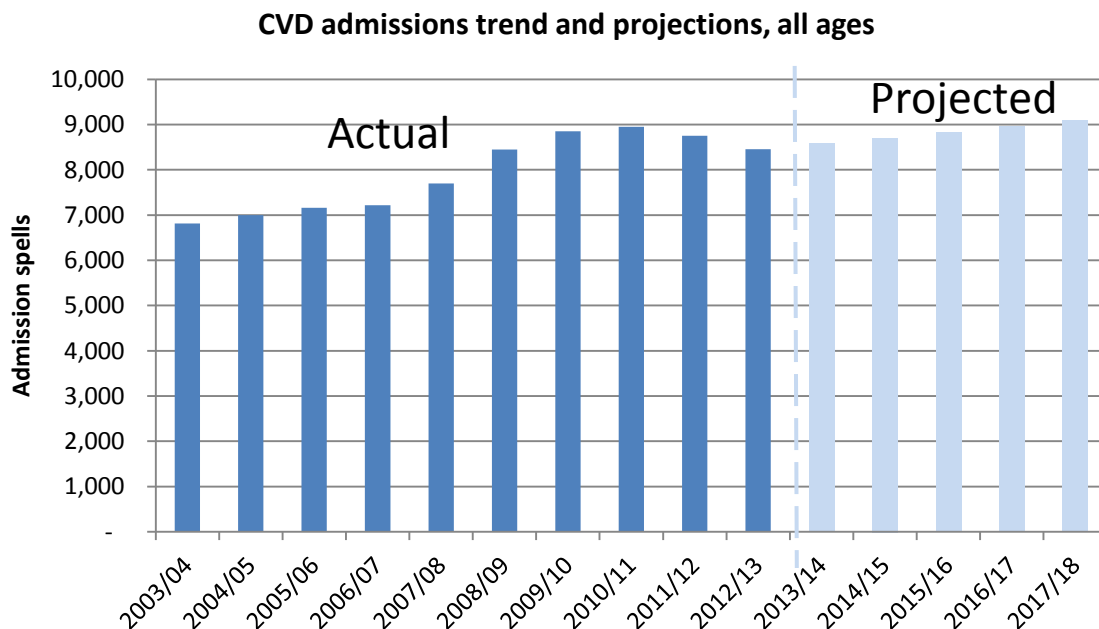
	% Change in admissions 2011/12 to 2012/13	Admission spells	Standardised Admissions Ratio (Age/Sex standardised)*	Total number of bed days	Average length of stay
Cardiovascular Disease (All)	-3.7%	8,453 (8748)	90.8*	48,971 (49,463)	7.9 (7.7)
Coronary Heart Disease	-0.2%	2,470 (2475)	88.6*	11,275 (11,662)	6.5 (6.7)
Stroke	9.3%	1,161 (1062)	103.6	15,644 (14,404)	13.6 (13.8)

Source: Hospital Episode Statistics, 2012/13 (From PHM Dr. Foster Intelligence)

*Green = significantly lower than expected based on England values

Notwithstanding the recent decrease in admissions, Figures 2, 3, 4 show the general trend over the last decade is of increasing hospital admissions, with annual variation. Since 2003/04 there has been a 24% increase in overall CVD admissions, a 6% increase in CHD admissions and a 27% increase in stroke admissions.

Figure 2:



Source: Hospital Episode Statistics, 2012/13 (From PHM Dr. Foster Intelligence)

Note: The projection is calculated by extrapolating historical data and takes no account of past, present or future activities that may impact on its trajectory.

Based on 6 year historical data, projections are provided up to 2017/18. For CVD this would represent a 22% increase, for CHD a 7% increase, and for stroke a 42% increase from 2012/13 to 2016/17. Although these figures are estimates only, in light of the trend data and Wiltshire’s aging population; over the next 5 years cardiovascular disease and its composite conditions are likely to place an increasing demand upon hospital services in Wiltshire.

Figure 3:

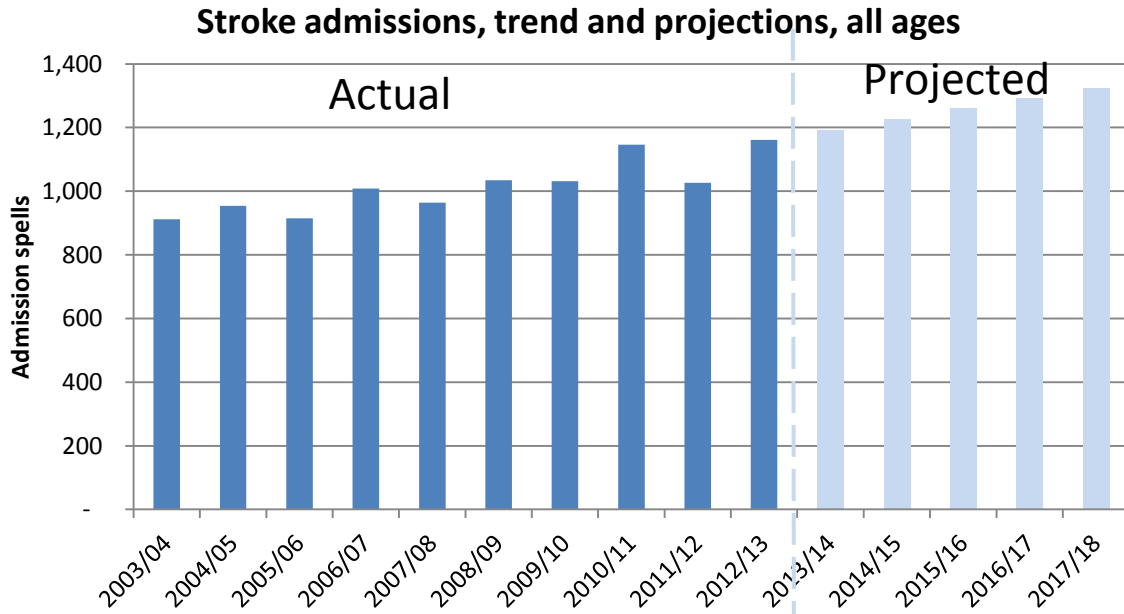
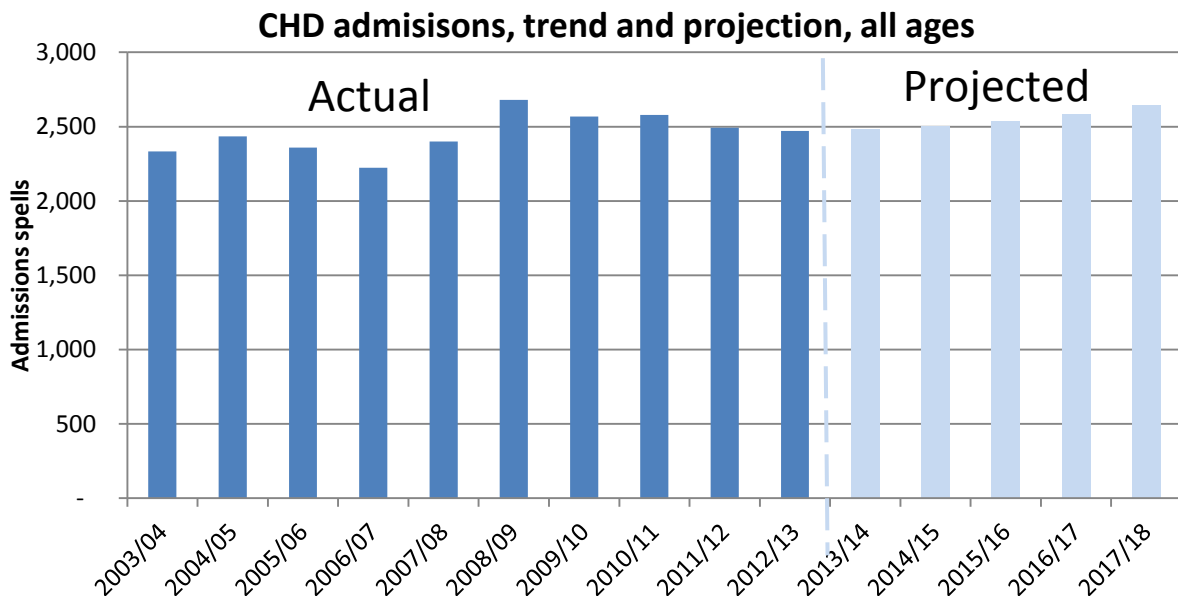


Figure 4:

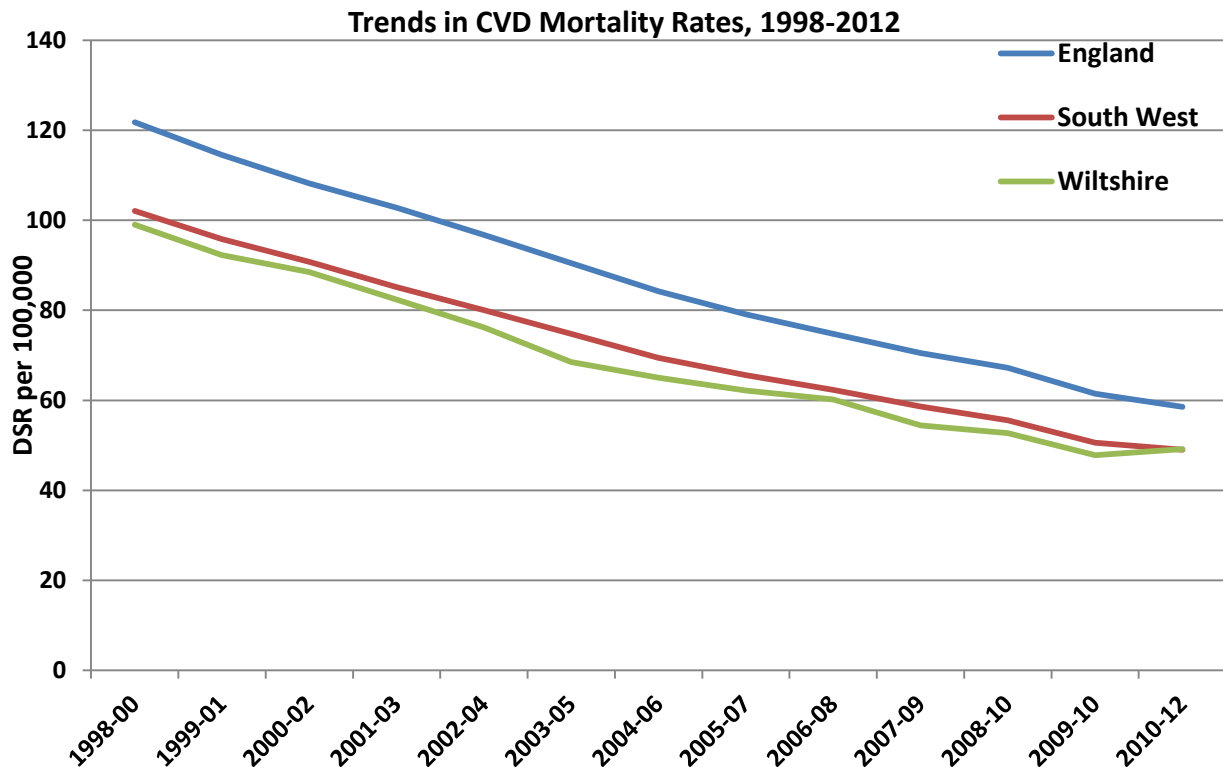


Source: Hospital Episode Statistics, 2012/13 (From PHM Dr. Foster Intelligence)
 Note: The projection is calculated by extrapolating historical data and takes no account of past, present or future activities that may impact on its trajectory.

Mortality

Premature mortality is defined as deaths occurring before the age of 75. Figure 5 shows that age-standardised premature deaths from CVD in Wiltshire have approximately halved in a decade, declining by 50% from 99 per 100,000 to 49 per 100,000 population. However, Wiltshire's current rate for CVD still represents around 260 deaths per year.

Figure 5:

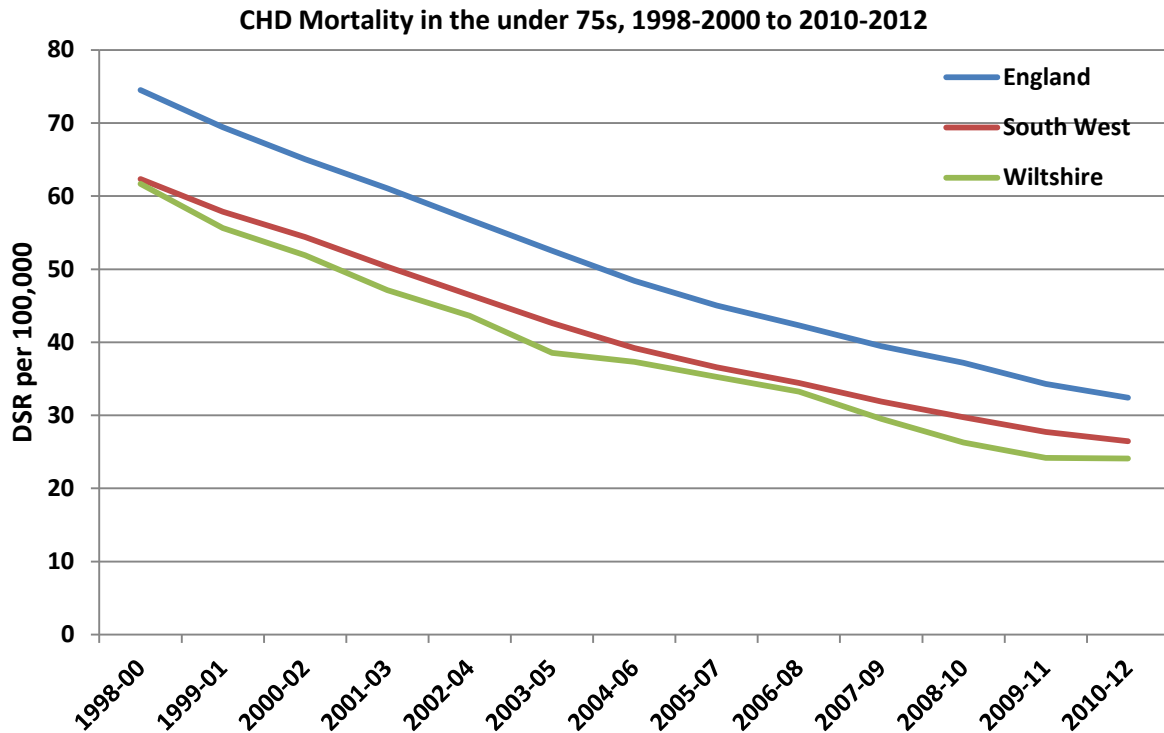


Source: HSCIC portal: (I00-I99) 0- Directly standardised premature CVD mortality rates per 100,000

Premature mortality from CHD follows the same trend observed for overall CVD, with an even greater mortality reduction in Wiltshire of 61% from 1998-2000 (Figure 6). Similarly, premature mortality from stroke has sharply declined, by 47% in Wiltshire since 1998-2000 (Figure 7). However, since 2005-2007 the stroke mortality reduction has levelled off, as shown by the mortality rate in 2005-2007 (9.97 per 100,000 population) being similar to that observed in 2010-2012 (9.74 per 100,000).

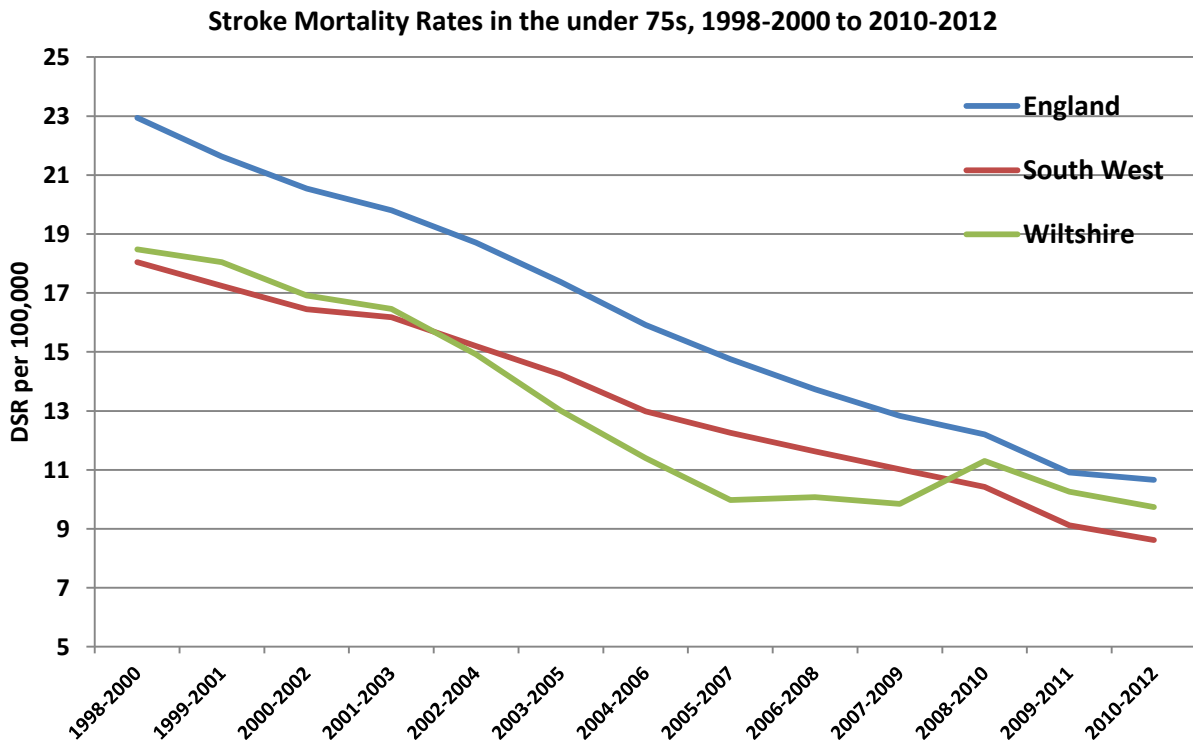
In summary, Wiltshire's premature mortality rates for CVD and CHD have been consistently below England. For stroke, the Wiltshire rate has been consistently lower than the England rate, and similar to or lower than the South West rate except for in recent years where it is now above the South West value.

Figure 6:



Source: HSCIC portal

Figure 7:



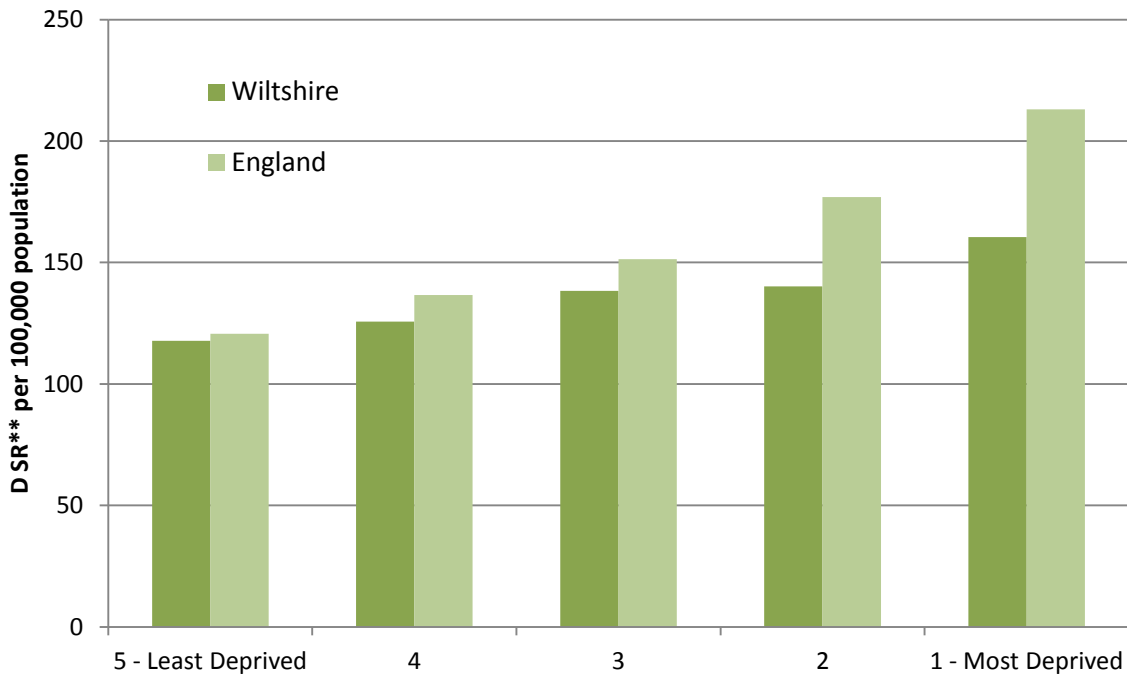
Source: HSCIC portal

For facts and figures specific to stroke please refer to this [Stroke Facts & Figures](#) document.

Population At-Risk

Although the annual rate of premature mortality from CVD in Wiltshire has halved in a decade, people in more deprived areas of Wiltshire still bear much of the burden of cardiovascular disease. This is illustrated by the all age mortality rates for CVD in Figure 8.

Figure 8: CVD Mortality rates, all ages, by deprivation quintile, 2009-11*



*reproduced from Cardiovascular Disease Wiltshire Health Profile⁶

** Directly standardised rate find out more in the [statistical guide](#)

Figure 8 shows Wiltshire's lower mortality rate for CVD compared to England occurs across all deprivation quintiles in the population. The burden of mortality from CVD is greatest in the most deprived population quintile in both Wiltshire and England. In Wiltshire the difference in mortality rate between the most deprived (160 per 100,000 population) and least deprived (118 per 100,000) is statistically significant. This mortality rate in the most deprived quintile is 36% higher than the rate in the least deprived quintile. However, nationally the gap is much greater; the mortality rate in England is 77% higher in the most deprived than in the least deprived. For further information on the deprivation gap in Wiltshire see the 2012 report '[Premature Cardiovascular Disease Mortality and Health Inequalities in Wiltshire](#)'

Males have a higher prevalence of cardiovascular disease than females. This relates in part to biology, and also down to the role played by men in the workforce. There is also anecdotal evidence that generally women are more concerned about their health seeking assistance earlier than men for an equivalent condition and are more aware of lifestyle factors which affect health. Please see the section on [Men's Health](#) for further information.

Current service provision

Primary and secondary care services are available to intervene when CVD is suspected both to confirm this diagnosis, and to treat patients appropriately. Those services include GPs diagnosing and helping patients to manage their conditions in the community, together with acute services such as angioplasty and stroke thrombolysis which are available to Wiltshire patients county-wide.

Public Health services emphasise the importance of preventing CVD, and a number of preventative programmes are underway in Wiltshire. These include:

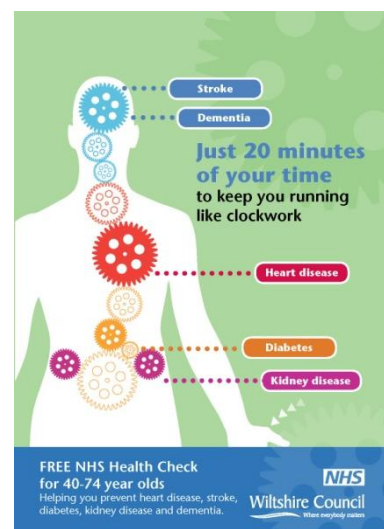
- NHS Health Checks (see later section)
- Health improvement campaigns.
- [Active Health \(physical activity on referral\) programme.](#)
- Adult and children weight management programmes.
- [Healthy schools programme.](#)
- Change 4 Life programme.
- Implementation of Wiltshire Alcohol strategy.
- Pharmacy health promotion campaigns.
- Generic health promotion campaigns.
- **Stop Smoking Service** (See the [Smoking section](#)).

Additionally, the following Public Health CVD-related programmes are targeted at people living in deprived areas:

- [Health trainer programme.](#)
- Early years healthy eating programme.
- CVD outreach activity by pharmacies – delivered in partnership with Local Pharmaceutical Committee.
- CVD outreach-based model of *ad hoc* sessions at markets and other venues – implemented via locality lead GPs and Public Health Lifestyles Team.
- HMP Erlestoke has offered an NHS Health Check to new arrivals aged 40-74 since March 2010.

NHS Health Checks

The NHS Health Checks programme is a national preventative programme which is intended to help people stay healthy for longer by providing an assessment of cardiovascular risk to all 40-74 year-olds. It also empowers patients by giving them information about their health, supports lifestyle changes and offers early interventions if required. It provides a vital opportunity to identify people developing Type 2 diabetes, to refer them for further tests as necessary, and to provide them with simple, practical and realistic



steps to help reduce their risk and stay healthy.

In Wiltshire, this service is provided by all GP practices. Everyone between the ages of 40 and 74 who has not already been diagnosed with a cardiovascular condition will be invited to have a check once every five years. In Wiltshire this means inviting around 30,000 people each year. In 2012/13 nearly 30,800 invitations were sent out and 48% of those invited completed a health check appointment.

For further information on NHS Health Checks see the [NHS Health Checks Background Information Sheet](#).

Abdominal Aortic Aneurysm (AAA) Screening



In 2005 there were almost 5,000 deaths in England and Wales due to AAA, over 95% of which occurred in people aged 65 and over. Death from a ruptured AAA is more than twice as common in men as in women. About one-third of AAAs will rupture if untreated, with those above 5.5cm in diameter being most likely to rupture. In these circumstances about half those with a ruptured AAA will die before they reach hospital and in those who survive to undergo emergency repair the operative mortality is around 40%.

In Wiltshire the AAA Screening Programme is provided by Salisbury NHS Foundation Trust. It aims to reduce deaths from ruptured abdominal aortic aneurysms by up to 50% by detecting them early and monitoring and treating them appropriately. Women are not invited for screening because 95% of ruptured AAA occur in men over 65. During the year they turn 65, all men in Wiltshire will receive a letter from the NHS inviting them for AAA screening, providing they are registered with a doctor. Screening involves an ultrasound scan that takes around 10 minutes. Scans are carried out at different locations around the county and your invitation letter will give you more details. Men over 65 who have not been screened previously can arrange a screening appointment by contacting their local programme directly.

Rehabilitation Classes

Cardiac Rehabilitation is a professionally supervised programme that reduces post-cardiac event-related mortality and morbidity. Cardiac rehabilitation supports patients' return to work, improves their functional capacity and physical activity status and perceived quality of life, and supports the development of self-management skills.

Wiltshire Public Health has continued to build on the success of the community-based cardiac rehabilitation programme provided in Westbury by the Royal United Hospital (RUH). This Phase 3 nurse-led programme is also offered on a regular

basis in Chippenham, again provided by the RUH. This year also sees the start of a county-wide enhancement to cardiac rehabilitation, with patients being offered the option of a Heart Manual service. This option enables individuals to exercise and progress at their own pace with the support of a cardiac rehabilitation nurse, but without having to attend regular classes.

Public Health also resources the Phase 4 Cardiac Rehabilitation classes and Exercise after Stroke classes provided at a range of leisure centres in Wiltshire. These structured rehabilitation classes are part of the Wiltshire Active Health Programme. For details of these programmes in Wiltshire [click here](#). For class locations see this [map](#).

What do service users / the public think?

Wiltshire Voices is a unique video project that records the stories of local people in Wiltshire, reaching out to people who normally struggle to get their voices heard in traditional ways. One video film looks at how local people in Wiltshire cope with life after having a stroke. View the film [here](#).

In November 2011 a Focus on Stroke Event was held in Wiltshire. This event provided an opportunity to address issues relating to stroke for patients, carers, health and social care professionals and the voluntary sector. A summary of the event is available [here](#).

What works and what resources are there?

Wiltshire

[Wiltshire Stroke Directory](#). This provides a directory of community resources for people in Wiltshire affected by stroke, their family, and their carers.

National

[CVD Health Profiles](#). These provide a snapshot of key issues relating to heart disease and stroke, including incidence, mortality, risk factors, treatments and costs.

[National CVD Outcomes Strategy](#). This sets out outcomes for people with or at risk of cardiovascular disease (CVD) in line with the NHS and Public Health Outcomes Frameworks. The strategy recommends:

- reducing premature mortality rates for CVD by improving prevention, diagnosis and treatment, bringing all services up to the standards of the best.
- managing CVD as a single family of diseases and develop a standardised template for community and hospital care.
- supporting better identification of families or individuals at high risk of CVD and improve its management in primary care.
- improving intelligence, monitoring and research into CVD and publish comparative data on the quality of care provided for patients with CVD.

National Service Framework for Diabetes (2003). The National Service Framework for Diabetes was produced in 2001, and provided a vision for diabetes service development to 2013.

National Stroke Strategy (2007). This document provides a quality framework to improve stroke services, inform patient expectations and provide guidance within the NHS.

National Service Framework for Coronary Heart Disease (2000). This document set out a strategy to modernise CHD services over ten years, improving prevention, diagnosis, treatment and rehabilitation and access.

Deaths from cardiovascular diseases: Implications for end of life care in England This report describes the pattern of mortality and hospital admission for cardiovascular disease looking at variation by age, sex, region, socioeconomic deprivation and disease group.

Challenges for consideration

- Based on historical data hospital admissions for CVD (all), CHD and Stroke are likely to rise in the next 5 years.
- Hospital admissions for stroke are more than expected compared to England.
- There is gap in CVD health between the most deprived quintile and the Wiltshire average.

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¹ Department of Health

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_132358]

² NHS Outcomes Framework 2012/13, Department of Health, 2011.

³ Clinical Commissioning Group Outcomes Indicator Set (CCGOIS) 20013/14, NHS Commissioning Board, December 2012. url: <http://www.nice.org.uk/aboutnice/cof/cof.jsp>

⁴ Cardiovascular Disease Wiltshire Health Profile, SEPHO
<http://www.sepho.org.uk/NationalCVD/NationalCVDProfiles.aspx>

⁵ includes heart disease, stroke, diabetes and kidney disease

⁶ <http://www.sepho.org.uk/NationalCVD/NationalCVDProfiles.aspx>